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Reply to Office action of September 24, 2003

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REMARKS/ARGUMENTS

Claims 13-27 stand pending in the application. In the Examiner's Final Office Action, claims 13-27 are rejected.

Claims 13-18 and 24-27 are rejected by the Examiner under 35 USC 102(b) as being anticipated by WO00/36482 (Chrompack).

By the amendments made herewith, previously pending claim 13 is currently amended to incorporate the limitations of previously pending claims 24-26. Previously pending claims 24-26 are cancelled, without prejudice. It is respectfully submitted that the amendments made herewith traverse the Examiner's rejections for the reasons set out below.

It is submitted that Chrompack does not disclose all of the features of currently amended claim 13. In particular, Chrompack does not disclose having control valve means in the second housing, as conceded by the Examiner in the Office Action, where he states that "the reference inlet and outlet valves are not shown mounted within the second housing" in Chrompack. The Examiner continues by saying that the valves of Chrompack "do control the flow in and out respectively therefrom, thus are somehow mounted on the second housing." Applicants respectfully disagree with the Examiner's inference that the inlet and outlet valves are necessarily "somehow mounted on the second housing", merely because they are configured to control inlet and outlet flow. Chrompack is silent as to the valves being mounted anywhere, let alone in the second housing. Accordingly, it is submitted that Chrompack does not anticipate claim 13, as it does not disclose control valve means in the second housing, as claimed.

Claim 13 is amended to further specify that the fluid outlet defined with respect to the first chamber is an outlet of the back pressure valve. This limitation assists in distinguishing features of the first chamber from the inlet chamber 2 shown in

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Chrompack, as the inlet chamber 2 does not have a fluid outlet which is an outlet of the valve. The outlet of the valve of Chrompack is provided by connector 8 via passage 7 and outlet opening 5. Accordingly, with the introduction of the limitation that the fluid outlet of the first chamber is an outlet of the back pressure valve, the first chamber, as recited in claim 13, cannot be read onto the inlet chamber 2 of Chrompack. Support for the introduction of this limitation is found in Figures 2a, 2b, 3a, 3b and 3c and in paragraph 30 on page 6 of the specification.

Claim 13, as currently amended, now includes, in addition to the previously recited features, the following limitations:

wherein the back pressure member is moveable to a closed position in which the back pressure member seals off fluid flow between the fluid inlet and the fluid outlet;

wherein the first chamber includes a bore, wherein the fluid inlet and the fluid outlet open into the bore, and wherein the back pressure member is slidably mounted in the bore for movement within the bore; and

wherein the back pressure valve further comprises a sleeve member disposed within the first housing and providing said bore for the back pressure member, the sleeve member being fixed to the first housing and having a lower opening that is closed by the back pressure member in the closed position and that permits fluid to flow from the fluid inlet to the fluid outlet when the back pressure member is in an open position.

(It is further submitted that Chrompack does not disclose all of the limitations introduced into currently amended claim 13. In particular, Chrompack does not disclose a sleeve member disposed within the first housing and providing a bore for the back pressure member, the sleeve member being fixed to the first housing and having a lower opening that is closed by the back pressure member in the

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closed position and that permits fluid to flow from the fluid inlet to the fluid outlet when the back pressure member is in an open position.

If the Examiner considers pressure regulating chamber 4 in Figure 2 of Chrompack to be the first chamber, then clearly Chrompack does not disclose a sleeve member disposed within the first housing and providing a bore included in the first chamber. The only thing resembling a sleeve member which Chrompack discloses is inlet connector 6 having a sleeve-like appearance, but inlet connector 6 is not disposed within pressure regulating chamber 4.

If the Examiner considers inlet chamber 2 of Chrompack to be equivalent to the first chamber, as recited in currently amended claim 13, then it is submitted that Chrompack still does not disclose a sleeve member providing the bore within which the back pressure member is slidably mounted for movement therewithin, nor does Chrompack disclose a sleeve member having a lower opening that is closed by the back pressure member in the closed position and that permits fluid flow from the fluid inlet to the fluid outlet when the back pressure member is in an opened position. The closure member 15 of Chrompack is not within the first housing but is only partially inserted therein. Additionally, the fluid outlet of inlet chamber 2 communicates fluid to the pressure regulating chamber 4 and thus Chrompack cannot anticipate currently amended claim 13 as it does not disclose "the fluid outlet (of the first chamber) being an outlet of the back pressure valve."

For the above reasons at least, it is submitted that Chrompack does not anticipate claim 13, as currently amended, and the Examiner's rejection of claim 13 is respectfully traversed.

Previously pending claims 14-18 and 27 depend on claim 13 and are submitted to be distinguished from Chrompack for the reasons given above in relation to claim 13 including and for other non-obvious features. Previously pending claims

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24-26 are cancelled and their limitations have been introduced into currently amended claim 13.

In the office action, the Examiner has rejected claims 19-23 as being unpatentable under 35 USC 103(a) over WO00/36482 (Chrompack) in view of Uehara et al. (US6,305,401).

Claims 19-23 depend indirectly on currently amended claim 13 and therefore include the limitations of amended claim 13, among other limitations. As Chrompack does not disclose all of the features of amended claim 13, for the reasons given above, either alone or in combination with Uehara et al., it is submitted that claims 19-23 are distinguishable from Chrompack and Uehara et al. Claims 19-23 are further distinguished from Chrompack and Uehara et al. for the following reasons.

Claim 19 recites (partly by virtue of its dependence on claim 18) a member (upon which are mounted the reference inlet and outlet valves) separate from and mounted on the second housing, which member comprises a gas dome, and wherein the second housing includes an end wall on which the gas dome is mounted. Neither Chrompack nor Uehara discloses such a member comprising a gas dome, nor is there disclosure of a gas dome mounted on an end wall of the second housing. The member upon which solenoid valve 31 and solenoid valve 32 are shown to be mounted to in Figure 1 of Uehara et al. is not shown to comprise a gas dome. A pressure sensor 35 is shown in Figure 1 of Uehara et al. intermediate the solenoid valves 31 and 32, but this is not equivalent to a gas dome.

Further, as recited in claim 22, the gas dome includes a flange portion abutting the end wall of the second housing. Neither Uehara et al. nor Chrompack disclose or suggest such features. Additionally, neither Uehara et al. nor Chrompack disclose or suggest a flange portion including at least one hole

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permitting the reference gas to flow from the reference inlet valve to the interior of the gas dome and at least one hole permitting the reference gas to flow out from the interior of the gas dome to the reference outlet valve, as recited in claim 22.

Claim 23 recites that the gas dome includes a hollow cylindrical portion, with the flange portion provided around the hollow cylindrical portion. Neither Uehara et al. nor Chrompack disclose or suggest the gas dome as recited in claims 19-22, let alone a gas dome including a hollow cylindrical portion, with the flange portion provided around the hollow cylindrical portion.

Claims 22 and 23 are amended for improved consistency of terminology

For the above reasons at least, it is submitted that claims 19-23 are non-obvious over Chrompack in view of Uehara et al. and the Examiner's rejection of claims 19-23 is therefore traversed.

New claims 28-34 are added by this amendment. New claims 28-30 further define features concerning a third chamber, while new claims 31-34 recite further features of the back pressure member. No new matter is added.

New claims 28-30 find support in Figures 2a, 2b, 3a, 3b and 3c and in paragraphs 30 and 31 on pages 6 and 7 of the specification. New claims 31-34 find support in Figures 4a and 4b and in paragraphs 32 to 34 on pages 7 and 8 of the specification. It is respectfully requested that new claims 28-34 be considered by the Examiner together with the presently pending claims 13-23 and 27.

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Applicants respectfully request favorable reconsideration of the present application.

Respectfully submitted,

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Encl.